

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for supporting charging of a subscriber of a mobile station in a cellular radio network supporting circuit-switched and packet-switched connections with the mobile station, the method comprising:

defining, for each of a plurality of mobile stations, a corresponding set of special cells providing at least one special service to the corresponding mobile station;

reporting an indication of a set of special cells to at least one mobility support element in an INSERT SUBSCRIBER DATA message in response to a mobile station initiating an attach or a routing area update procedure;

responding to the reporting by sending the indication of the set of special cells to a radio control element in a downlink message; and

determining whether the mobile station is in one of its corresponding special cells,

wherein reporting an indication of the set of special cells is performed by a subscriber register which is a home location register.

2. (Previously Presented) The method of claim 1, wherein: the downlink message is a Base Station Subsystem GPRS Protocol message.

3. (Currently Amended) A method for supporting charging of a subscriber of a mobile station in a cellular radio network supporting circuit-switched and packet-switched connections with the mobile station, the method comprising:

defining, for each of a plurality of mobile stations, a corresponding set of special cells providing at least one special service to the corresponding mobile station;

reporting an indication of a set of special cells to at least one mobility support element in an INSERT SUBSCRIBER DATA message in response to a mobile station initiating an attach or a routing area update procedure;

responding to the reporting by sending the indication of the set of special cells to a radio control element in a downlink message; and

determining whether the mobile station is in one of its corresponding special cellsThe method of claim 1, wherein the charging information includes at least one detail item, each detail item indicating an event which affects charging, the method further comprising:

classifying the at least one detail item into at least one class of multiple classes depending, at least, on whether the corresponding event occurred while the mobile station was in one of its corresponding special cells

wherein, the mobility support element is configured to perform or at least support the classification.

4. (Previously Presented) A method for supporting charging of a subscriber of a mobile station in a cellular radio network supporting circuit-switched and packet-switched connections with the mobile station, the method comprising:

defining, for each of a plurality of mobile stations, a corresponding set of special cells providing at least one special service to the corresponding mobile station;

determining whether at least one mobile station is in a special cell;

producing charging information related to the at least one mobile station, the charging information including at least one detail item indicating a corresponding event which affects charging;

classifying the at least one detail item into at least one class of multiple classes depending, at least, on whether the corresponding event occurred while the at least one mobile station was in one of its corresponding special cells; and

performing or at least supporting the classification using the at least one mobility support element.

5. (Cancelled)

6. (Currently Amended) A method for supporting charging of a subscriber of a mobile station in a cellular radio network supporting circuit-switched and packet-switched connections with the mobile station, the method comprising:

defining, for each of a plurality of mobile stations, a corresponding set of special cells providing at least one special service to the corresponding mobile station;

reporting an indication of a set of special cells to at least one mobility support element in an INSERT SUBSCRIBER DATA message in response to a mobile station initiating an attach or a routing area update procedure;

responding to the reporting by sending the indication of the set of special cells to a radio control element in a downlink message; and

determining whether the mobile station is in one of its corresponding special cells~~The method of claim 1,~~ wherein the at least one mobility support element is a support node of a packet radio network.

7. (Previously Presented) A cellular radio network configured to support circuit-switched and packet-switched connections with a mobile station, the network comprising:

a plurality of cells, at least one of which being associated with one or more mobile stations as one of a set of special cells associated with respective ones of the mobile stations, the special cells associated with mobile stations being configured to provide at least one special service to the associated mobile station;

at least one radio control element configured to determine whether a mobile station is in a special cell associated with that mobile station;

at least one mobility support element configured to receive, when it begins to serve the mobile station, an indication of the set of special cells associated with the mobile station, and configured to send the indication of the set of special cells associated with the mobile station to the at least one radio control element; and

at least one charging element configured to receive charging information related to mobile stations, the charging information including at least one detail item, each at least one detail item indicating an event which affects charging,

wherein the at least one mobility support element is configured to support or perform classification of the at least one detail item into at least one class of multiple classes depending, at least, on whether the corresponding event occurred while the mobile station was in one of its special cells associated with the mobile unit.

8. (Previously Presented) The cellular radio network of claim 7, wherein the at least one mobility support element is a serving GPRS support node configured to compare the cell identity of the mobile station's current cell with the indication of the set of special cells associated with the mobile station.

9. (Previously Presented) The cellular radio network of claim 7, wherein substantially each detail item indicates whether the cell in question is one of the mobile station's corresponding special cells.

10. (Previously Presented) The cellular radio network of claim 7 wherein the at least one mobility support element is configured to support or perform organisation of detail items including the at least one detail item as consecutive records, wherein substantially each record contains an indication of whether all events indicated by the at least one detail item of the record occurred while the mobile station was in one of its corresponding special cells.

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11. (Previously Presented) The cellular radio network of claim 7, wherein the at least one mobility support element is configured to insert into the at least one detail item the identity of the cell associated with the location of the mobile station at the occurrence of the event.

12. (Previously Presented) At least one mobility support element for a cellular radio network including a plurality of cells, and configured to support circuit-switched and packet-switched connections with at least one mobile station, the at least one mobility support unit comprising:

a receiver configured to receive, when the at least one mobility support element begins to serve the at least one mobile station, a list of predefined special cells associated with the at least one mobile station and configured to provide at least one special service to the at least mobile station;

a transmitter configured to transmit the list of pre-defined special cells associated with the at least one mobile station to at least one radio control element configured to determine whether the at least one mobile station is in a special cell associated with that mobile station, wherein the at least one mobility support element is configured to support or perform classification of at least one detail item included in charging information into at least one class of multiple classes depending on whether an event corresponding to the at least one detail item occurred while the at least one mobile station was in one of its corresponding special cells.

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13. (Previously Presented) A charging-related message for a cellular radio network including a plurality of cells, each cell having a cell identity, and configured to support circuit-switched and packet-switched connections with a mobile station, wherein the charging-related message includes at least one detail item for substantially each event that affects charging of a subscriber of the mobile station and, for substantially each detail item, the charging-related message is configured to at least indirectly indicate whether the mobile station was in one of its corresponding special cells when the corresponding event occurred.

14. (Previously Presented) The method of claim 1, further comprises producing charging information related to the mobile station.

15. (Previously Presented) The method of claim 1, wherein responding to the reporting is performed by the at least one mobility support element.

16. (Previously Presented) The method of claim 1, wherein reporting an indication of a set of special cells is performed by a subscriber register.

17. (Previously Presented) The method of claim 2, wherein the downlink message is a BSSGP_DL_UNITDATA message.

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18. (Previously Presented) The method of claim 2, wherein the downlink message is a SoLSA BSSGP message.
